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A Body Image Scale for Evaluating Transsexuals[1]

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Body image has come to mean not only the way one perceives his body but also how one feels about these perceptions. It is an important part of one's total self-concept. As such, it can present a significant problem for many individuals. For individuals with gender identity problems, such as transsexuals, body image dissatisfaction and distortion are a fundamental aspect of their condition. It is possible to more fully understand this condition by appreciating the distinction between the reality of the transsexual's body and his preferred body image. The Body Image (BI-1) scale presented here represents an effort to quantify the transsexual's body attitude. It consists of 30 body features which the subject is asked to rate on a 5-point scale of satisfaction. This test, as part of a larger seven-test battery, was administered to 16 male and 16 female transsexuals. The data have been analyzed for comparisons between males and females, for the effects of endocrinological and surgical treatment on body attitude, and for the common denominators which characterize the transsexual's body attitude. This instrument is being used as an additional tool in evaluating the transsexual's request for sex-reassignment surgery and in following those individuals who have been accepted for treatment as they progress through the evaluation and treatment program.

KEY WORDS: transsexualism; body image; sex reassignment; hormone treatment.

INTRODUCTION

With the legitimization of treatment for transsexuals which occurred as a result of the foundation of the Gender Identity Clinic at Johns Hopkins Hospital 9 years ago, we have witnessed the creation of some three dozen institutions

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throughout the United States and Canada which perform sex-reassignment surgery. It has been estimated that 1800 transsexuals have undergone sex-reassignment surgery in the United States alone. Each of these centers is employing multidisciplinary teams of investigators to evaluate the transsexual's request for sex reassignment, and to compare pre- and posttreatment data in an attempt to justify the hormonal and surgical treatment of this condition.

There is need for instruments to be developed which would permit results from one gender identity center to be compared with comparable data from other centers. The data from the small number of subjects which any one research project generated could then be compared with data from other populations of transsexuals in an attempt to further understand and define this phenomenon in objective and quantifiable terms. Stoller (1968) has attempted to define the syndrome historically, in terms of the early life history and parental dynamics, while others have attempted to describe the manifestations of this condition at the time when the individual makes his request for sex reassignment (Money and Primrose, 1968; Money and Brennan, 1968; Pauly, 1965, 1969a,b, 1974a,b,). The authors have turned to the area of body image, as it pertains to the transsexual, in the hopes that this concept will prove fruitful in adding to our understanding of transsexualism, and in providing an instrument that will be helpful in evaluating and treating individuals with gender identity problems.

The concept of body image has particular relevance to the phenomenon of transsexualism (Bowman and Engle, 1957; Guze, 1967; Money, 1967; Walinder, 1967; Kubie and Mackie, 1968; Money and Brennan, 1968; Money and Primrose, 1968; Benjamin and Ihlenfeld, 1973). Body image has come to mean not only the way one perceives his own body but also the way one feels about his perceptions. As such, it is an important part of one's overall self-concept (Schilder, 1950; Kolb, 1959; Berscheid *et al.*, 1973). The transsexual is unable to form a satisfactory body image because of the dissonance between his or her anatomical sex and gender identity (psychological sex). The reality of the transsexual's body does not conform to the preferred and desired body image. The result is a disturbance in the formation of a complete and consistent self-concept.

The transsexual attempts to reduce this dissonance through various means, the effects of which are to bring the physical form of his body into line with his preferred gender concept. He cross-dresses, and to that form of dress may add various accoutrements (e.g., wigs, makeup, and brapadding for male transsexuals and masculine haircut, flattened breasts, and padding in the crotch to simulate a penis for female transsexuals). In addition to these outward attempts to pass in society as a member of the opposite sex, the transsexual frequently assumes the preferred body image in his or her fantasies and dreams. Finally, the transsexual seeks the alteration of his actual body form, through endocrinological and surgical means, to bring his body into harmony with his preferred body image. This last step is the hallmark of the syndrome of transsexualism, and it is this request

DIRECTIONS: Circle the number which best expresses your feelings about the item mentioned as it applies to you. Then only if you have circled #3, #4, or #5, answer Yes or No whether you have considered and might want a change if it was possible through medical or surgical treatment.

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Change?	
nose	1	2	3	4	5	Yes	No
shoulders	1	2	3	4	5	Y	N
hips	1	2	3	4	5	Y	N
chin	1	2	3	4	5	Y	N
calves	1	2	3	4	5	Y	N
breasts	1	2	3	4	5	Y	N
hands	1	2	3	4	5	Y	N
adam's apple	1	2	3	4	5	Y	N
scrotum (vagina)	1	2	3	4	5	Y	N
height	1	2	3	4	5	Y	N
thighs	1	2	3	4	5	Y	N
arms	1	2	3	4	5	Y	N
eyebrows	1	2	3	4	5	Y	N
penis (clitoris)	1	2	3	4	5	Y	N
waist	1	2	3	4	5	Y	N
muscles	1	2	3	4	5	Y	N
buttocks	1	2	3	4	5	Y	N
facial hair	1	2	3	4	5	Y	N
face	1	2	3	4	5	Y	N
weight	1	2	3	4	5	Y	N
biceps	1	2	3	4	5	Y	N
testicles (ovaries-uterus)	1	2	3	4	5	Y	N
hair	1	2	3	4	5	Y	N
voice	1	2	3	4	5	Y	N
feet	1	2	3	4	5	Y	N
figure	1	2	3	4	5	Y	N
body hair	1	2	3	4	5	Y	N
chest	1	2	3	4	5	Y	N
appearance	1	2	3	4	5	Y	N
stature	1	2	3	4	5	Y	N

Fig. 1. BI-1 scale.

for the so-called change of sex operation which brings the transsexual to the physician. Because this request presents a very difficult decision for the evaluator (Green *et al.*, 1966; Pauly, 1968), various gender identity centers throughout the United States, Canada, and Europe have chosen to utilize cross-disciplinary teams to evaluate the request for sex-reassignment surgery. It is our hope that this instrument will prove useful to those professionals involved in the evaluation and treatment of such individuals and that it will add to our understanding of the phenomenon of transsexualism.

THE INSTRUMENT

The Body Image-1 (BI-1) scale consists of a list of 30 body parts and features which the patient is instructed to rate on a 5-point scale of satisfaction (Fig. 1). A score of 1 indicates "most satisfied," a score of 5 indicates "most dissatisfied," and a score of 3 indicates a "neutral" response to that body part. In addition, for each item marked with a neutral or dissatisfied score (i.e., scores 3, 4, or 5) the patient is asked to indicate whether or not he or she might want this body feature altered through medical and/or surgical treatment. This additional information provides a further measure of the degree of a patient's dissatisfaction.

The male scale is administered to male-to-female transsexuals and the female scale to female-to-male transsexuals. The scales are identical except for the sexual body parts, with the biological male being asked to rate his penis, scrotum, and testicles, while the biological female is asked to rate her vagina, clitoris, and ovaries-uterus. Each of the 30 items falls into one of three basic groups based on its relative importance as a gender-defining body feature: primary genderal, secondary genderal, and hormonally unresponsive (neutral) characteristics. The primary genderal group includes penis, scrotum, testicles, facial hair, body hair, and breasts for the males, and vagina, clitoris, ovaries-uterus, breasts, chest, facial hair, and voice for the females. The secondary genderal characteristics include hips, figure, waist, arms, buttocks, biceps, appearance, stature, muscles, weight, thighs, and hair for both males and females, plus voice and chest for males and plus body hair for females. The hormonally unresponsive (neutral) group is made up of nose, shoulders, chin, calves, hands, adam's apple, eyebrows, face, feet, and height for both sexes. Initially designed with only 25 items, the scale was soon expanded to 27 and then to 30 items to provide more equal representation within all three groups.

METHODOLOGY

The BI-1 was administered to 16 male and 16 female transsexuals. All of the subjects have been evaluated at the University of Oregon Medical School by

one of the authors (I. P.). This body image scale is part of a larger battery of seven tests in all, which are usually given at one time. The patients are told that this battery is part of the usual evaluation procedure. The other six tests include the Body Image-2 (BI-2) scale, the MMPI MF scale, the Draw-a-Person test, 15 selected Holtzman inkblots scored for barrier penetration, a sentence-completion form of 25 body image related phrases, and a questionnaire exploring other aspects of body attitude. The results from these instruments and the correlations with the BI-1 scale will be reported at a later date. In retest situations, only the BI-1, BI-2, and sentence-completion form are readministered.

The subjects ranged in age from 17 to 46 years. Marital history varied considerably, with the majority of subjects never having married. Some were married only in the preferred role, others had previously been married in the now rejected role, while still others had been married in both roles at different times. The number of years having passed in the preferred role for patients without surgery ranged from 0 to 31 years. The stage of treatment at which the patient was originally tested varied with the individual. Some patients were tested only during the evaluation period and others only after starting hormonal treatment. One male and one female patient had undergone complete sex-reassignment surgery prior to testing, in which case they were administered the scale appropriate to the reassigned sex. Seven patients were first tested on one of their initial evaluation visits and later retested after beginning endocrinological treatment. Thus this pilot project has utilized a new instrument given to a small heterogeneous group of individuals seeeking or already having started with sex-reassignment procedures.

SCORING

The data from the BI-1 scale have been scored and analyzed in two ways. First, a median score was given to each individual as a measure of his or her overall body attitude. In addition, these BI-1 median scores were further broken down into separate BI-1/30 and BI-1/10 scores. The BI-1/30 score represents the median of all 30 items, whereas the BI-1/10 score includes only those ten body parts which were felt to be hormonally unresponsive or neutral (i.e., nose, shoulders, chin, calves, hands, adam's apple, eyebrows, face, feet, height). These scores are used singly to evaluate each patient individually, and collectively to analyze the whole group of 32 patients (collective data). Second, the scores on each of the 30 body features were looked at separately on both an individual and a group basis.

The reliability of the BI-1 test scores was measured by multiple testing, and in all cases the scores were highly consistent for any given patient. In addition, the consistency and accuracy of a patient's responses were evaluated by comparison with a second instrument, the BI-2, which also measures body attitude but in a somewhat different way.

RESULTS AND DISCUSSION

Before presenting the results, a brief explanation of statistical methods is in order. Depending on the point under discussion, the data may be drawn either from independent samples or from related samples. For any two independent samples being compared, any given subject is included within only one of the two groups. In contrast, the related samples compare two groups of scores for individuals all of whom were tested twice and whose scores appear in both groups. In some instances, a combination of independent and correlated data has been used where the advantage of a larger N outweighs the statistical considerations. Wherever these combined data have been used, the independent and related samples comprising it are analyzed separately as well. In every instance, the separate analysis supports the results of the combined data.

The statistical tests used are the nonparametric Wilcoxon matched-pairs, signed-ranks test for related samples and the Mann-Whitney U test for independent and combined data. Wherever relevant, the nature of the sample is indicated.

Collective Data

Tables I and II present the median scores of all the patients tested, grouped according to biological sex and extent of endocrinological and surgical treatment. It should be noted that seven of the patients (three males and four

Table I. Median Scores for Male Transsexuals (N = 16)

Patient No.	BI-1/30		BI-1/10	
	Before treatment	After treatment	Before treatment	After treatment
1	2.50		2.00	
2	2.43		2.00	
3	3.36		3.10	
4	3.29		3.05	
5	3.75		3.00	
6		1.25		1.05
7		2.38		2.33
8		2.44		2.21
9		2.35		2.10
10		2.09		1.93
11		2.91		2.88
12		1.29		1.50
13	4.33	4.00	4.50	3.90
14	3.58	2.15	3.00	2.17
15	3.90	3.50	2.50	2.30
16 (postop)		1.94		1.93

Table II. Median Scores for Female Transsexuals (N = 16)

Patient No.	BI-1/30		BI-1/10	
	Before treatment	After treatment	Before treatment	After treatment
17	3.80		2.50	
18	2.25		2.00	
19	1.50		1.05	
20	2.25		2.00	
21	4.42		3.88	
22	2.50		2.00	
23		2.32		1.93
24		2.07		2.00
25		3.30		2.75
26		2.15		2.05
27		2.42		2.00
28	2.37	1.18	1.93	1.00
29	1.08	1.97	1.00	1.33
30	3.86	2.83	2.21	1.50
31	3.21	3.07	2.33	2.33
32 (postop)		1.10		1.05

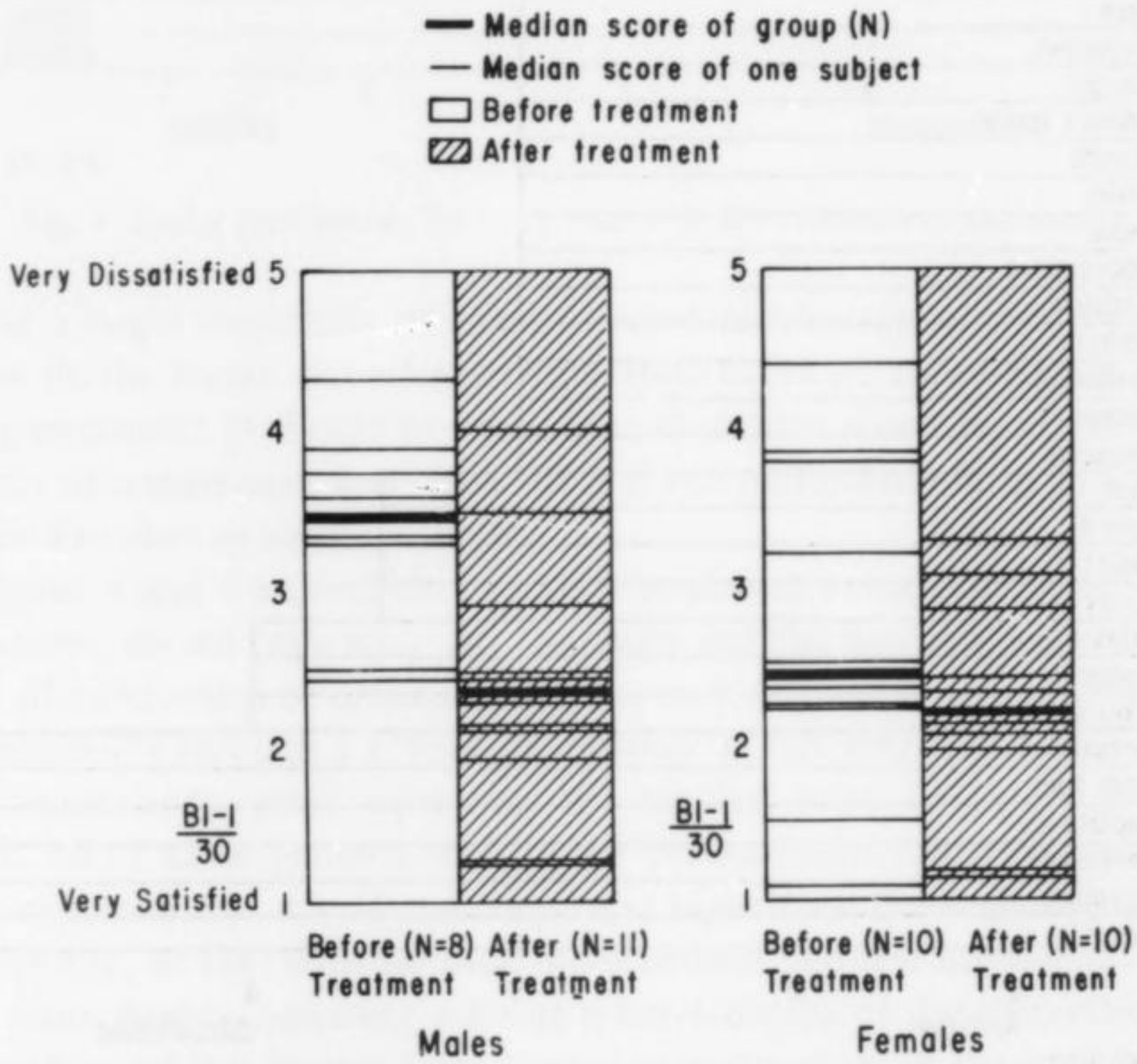


Fig. 2. Comparison of median scores for male and female transsexuals.

females) are included within both the before- and after-hormone-treatment groups, whereas all other individuals appear only once in the data.

Figure 2 is a graphic presentation of the data from Tables I and II. It illustrates the range of responses that was found for this group of transsexuals. The male BI-1/30 scores range from 2.43 to 4.33 with a group median of 3.47 before treatment and from 1.25 to 4.00 with a group median of 2.35 after treatment. The range of female BI-1/30 scores is from 1.08 to 4.42 with a group median of 2.44 before treatment and from 1.10 to 3.30 with a group median of 2.24 after treatment. The BI-1/10 scores vary from 1.00 to 4.50, inclusive of both sexes and both treatment states.

Although there is a wide range for both sexes, the pretreatment females have a lower group median score than the comparable male group. This difference approaches statistical significance with $\alpha = 0.1$. The group median scores for the post-hormone-treatment patients of both sexes are quite close. It appears that the male-to-female transsexuals as a group are initially more dissatisfied but

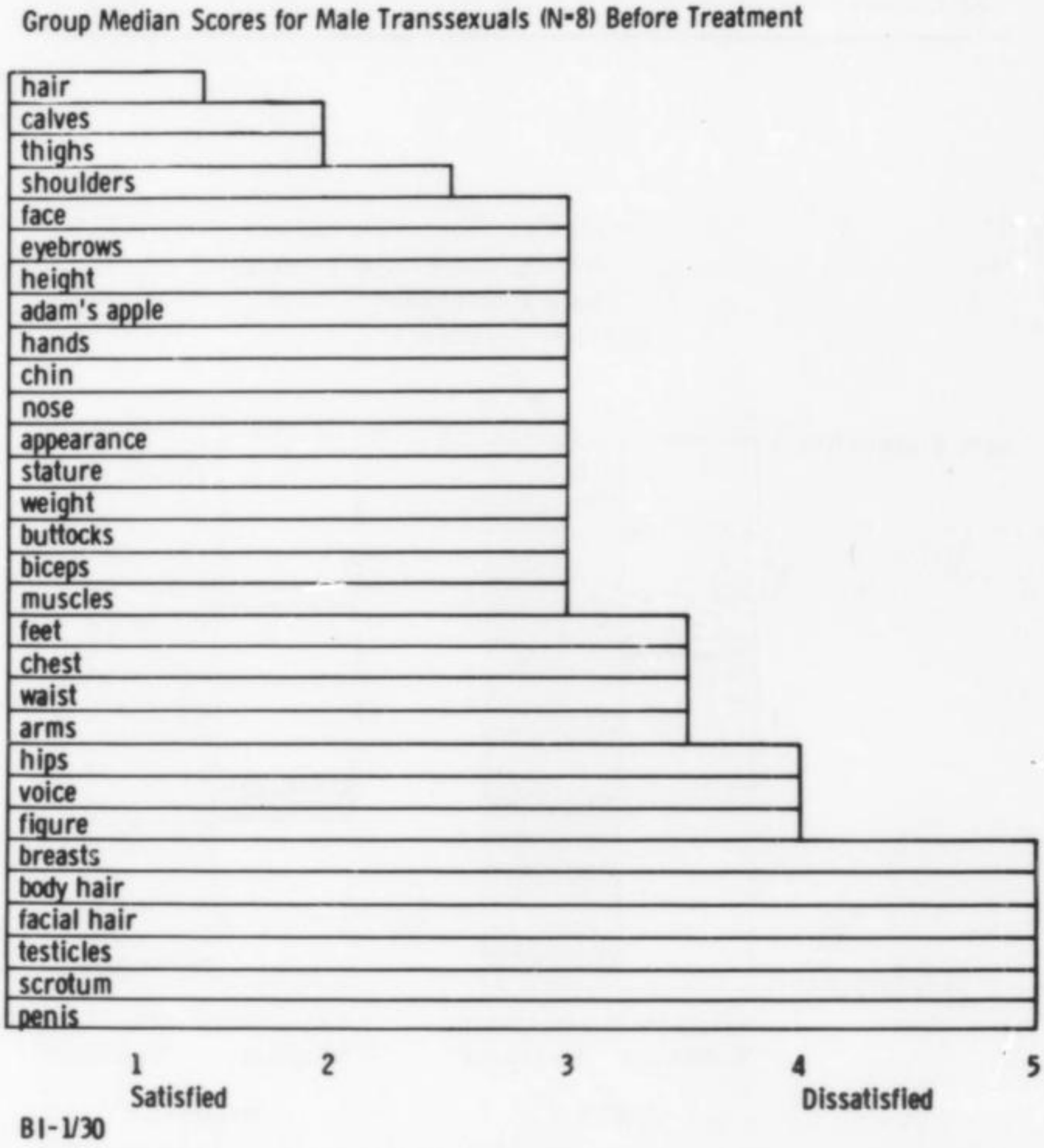


Fig. 3. Initial preferences for body characteristics (male transsexuals).

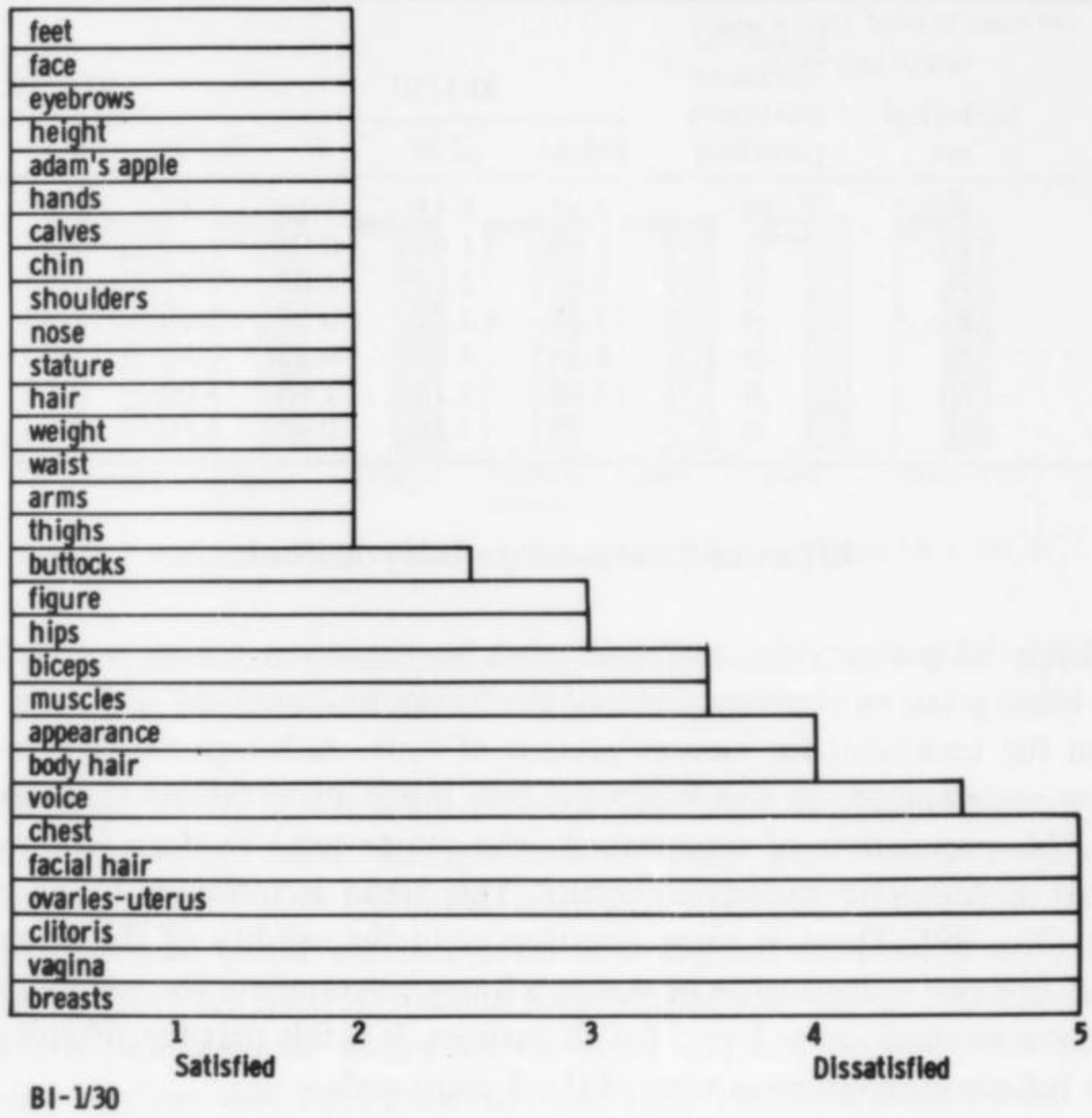


Fig. 4. Initial preferences for body characteristics (female transsexuals).

then show a larger increment of change toward satisfaction with hormone treatment than do the female-to-males patients. Both sexes are about equally satisfied following treatment. It should be noted here that these scores represent only one population of transsexuals for which the *N* is not particularly large and therefore should not be taken as absolute limits.

Figures 3 and 4 present the collective responses to each of the 30 different body features, shown separately for the males and the females. These data show the level of satisfaction or dissatisfaction for each of these body features, from 1 ("very satisfied") through 5 ("very dissatisfied"). The length of each horizontal bar (i.e., each body part) represents the median score of the *N* patients as indicated. All of these patients were in the pretreatment category when tested.

As expected, the sexual anatomy rates highest on the scale of dissatisfaction. Generally, as the items become more neutral and less hormonally responsive the score drops, indicating a lower relative degree of dissatisfaction. These results confirm what is known from clinical experience about the specifics of the transsexual's body attitude.

Table III. Effect of Contrary Sex Hormone Treatment on Median Scores

Patient No.	Biological sex	Extent of hormone treatment (months)	BI-1/30			BI-1/10		
			Before	After	*d*	Before	After	*d*
28	F	10	2.37	1.18	1.19	1.93	1.0	0.93
29	F	7	1.08	1.97	−0.89	1.0	1.33	−0.33
30	F	5	3.86	2.83	1.03	2.21	1.50	0.71
31	F	9	3.21	3.07	0.14	2.33	2.33	–
13	M	5	4.33	4.00	0.33	4.50	3.90	0.60
14	M	8	3.58	2.15	1.43	3.00	2.17	0.83
15	M	3	3.90	3.50	0.40	2.50	2.30	0.20

Effect of Treatment on Body Attitude

Table III presents the correlated data on the seven transsexuals who were tested both prior to starting contrary sex hormone treatment and after having been on the treatment for various periods of time. Although the *N* is too small to show significance on the Wilcoxon test, some observations may be made. Within this population of transsexuals, the scores tend to drop (toward more satisfied) as hormone treatment occurs. This trend is followed by all but one patient (No. 29). There is some question as to the validity of the original test score of this one individual as he was in a hurry to complete the test and was the only testee to mark only 1 or 5 for all answers. It is felt that the subject did not use the full discriminatory powers of the 5-point scale.

Further evidence for increased body satisfaction after treatment is provided by data selected from Tables I and II. The independent data from males tested before and after hormones are significant at $\alpha = 0.048$. The indepen-

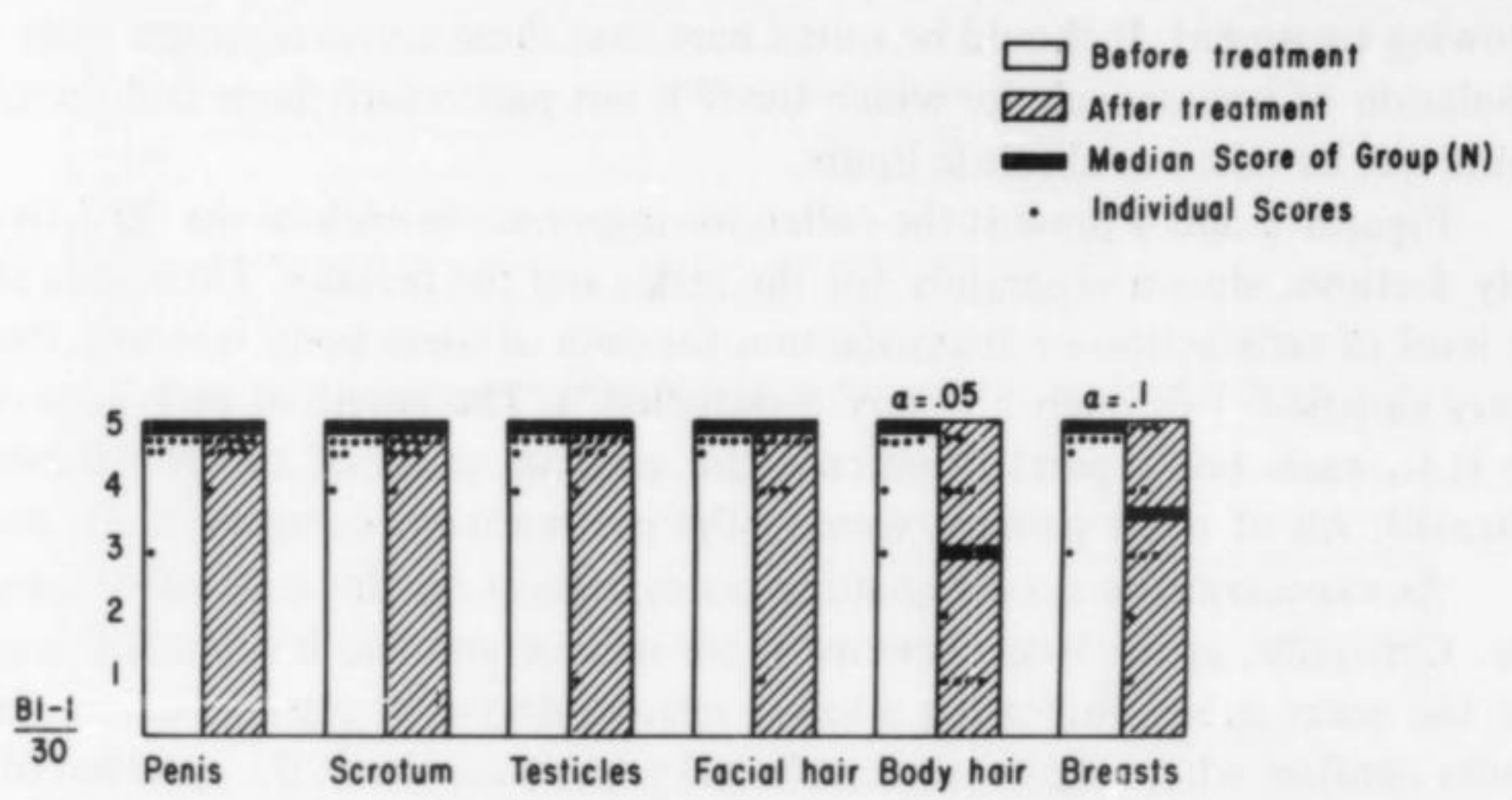


Fig. 5. Primary genderal characteristics of male transsexuals ($N = 8, 10$).

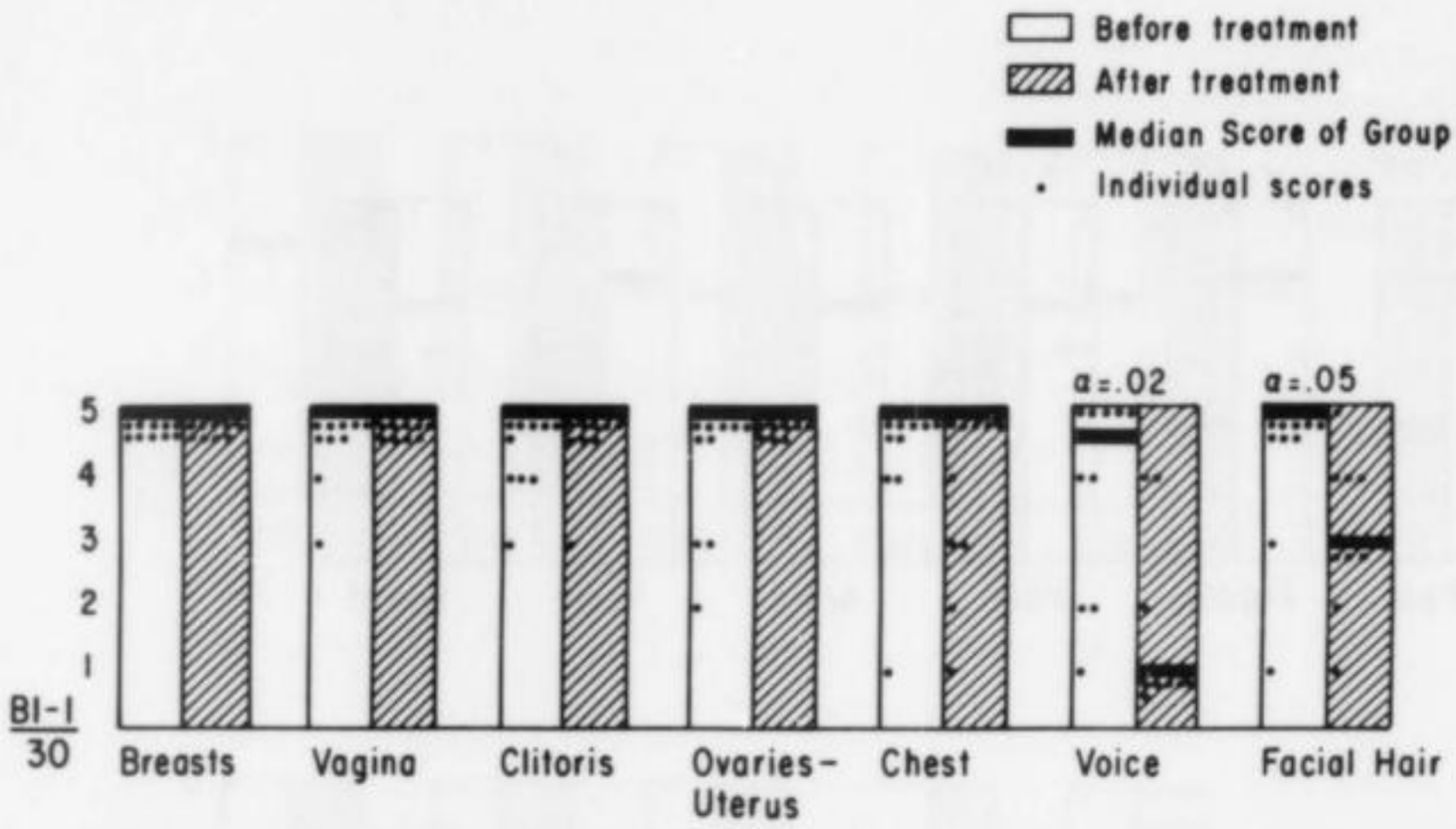


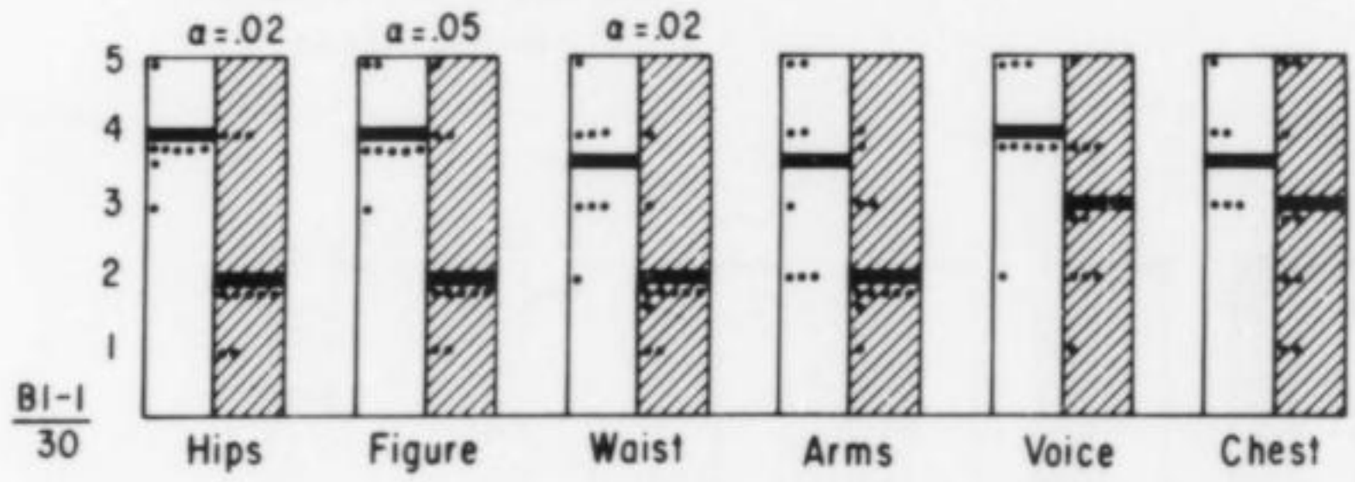
Fig. 6. Primary genderal characteristics of female transsexuals (N = 10, 9).

dent plus correlated data (combined data) for males and females show significance at $\alpha = 0.05$. The independent data for females alone are not statistically significant.

Although the N is too small to generalize, there is some evidence that the instrument can detect subtle changes in body image improvement which would be expected to occur after hormone or surgical treatment. Obviously one would be very concerned about the individual who did not show some improvement (i.e., lowering) of his BI-1/30 median score during the course of hormone therapy. In the one instance where improvement did not occur in this group of subjects, it is clear that the patient did not fully understand the initial instructions. Otherwise, all subjects showed a definite improvement in their overall BI-1/30 scores as well as a lowering (more satisfied) response in their BI-1/10 scores. Thus there was not only a greater satisfaction with those body parts which are thought to be responsive to the hormone treatment but also a generalized greater acceptance of those body parts which are known not to be responsive to contrary sex hormone therapy.

A further examination of the data provides a comparison between the collective scores of the before and after groups for each of the 30 body parts and features (using combined data). Figures 5 to 10 present this information for males and females separately, with the 30 items grouped into the three descriptive categories previously mentioned (i.e., primary genderal, secondary genderal, and hormonally unresponsive or neutral).

For both sexes, the scores for the primary genderal characteristics indicate the highest degree of dissatisfaction on both an absolute and a comparative basis. Although some of these body features are physiologically responsive to hormones, there is no significant change in the patient's rejecting attitude toward them even with hormone treatment. This seems reasonable since the normal sexual anatomy has never been part of the transsexual's acceptable body image.



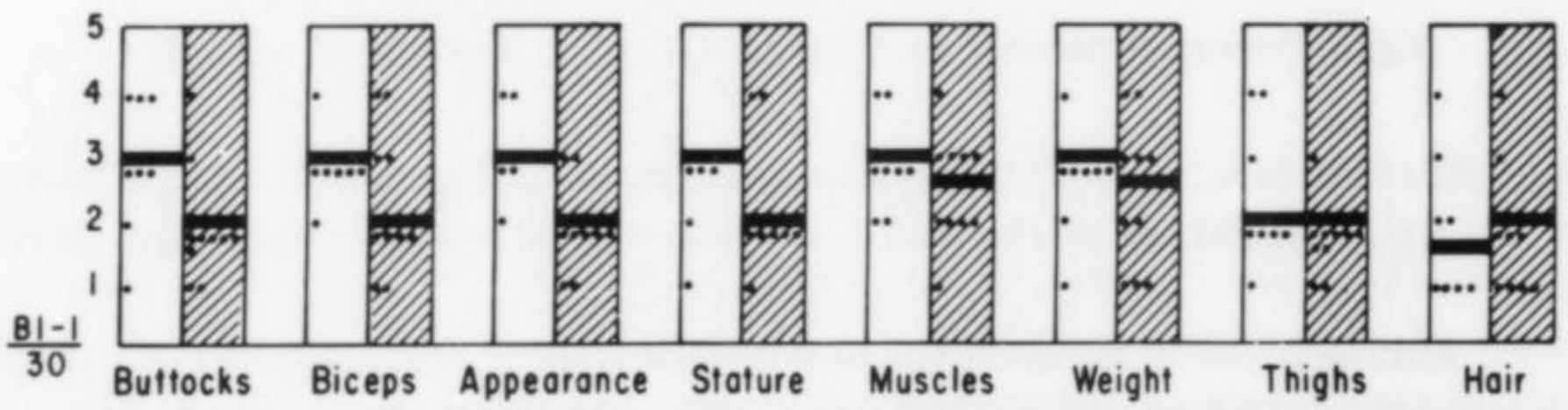
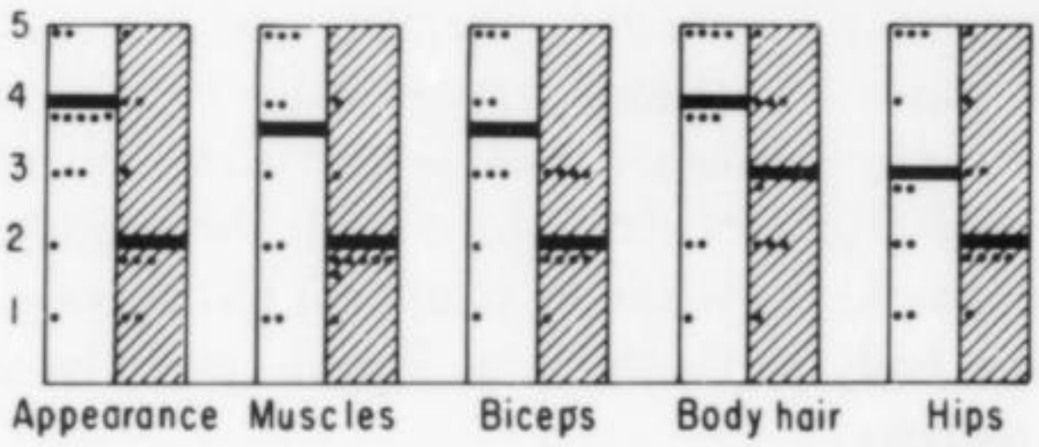


Fig. 7. Secondary genderal characteristics of male transsexuals (N = 8, 10).



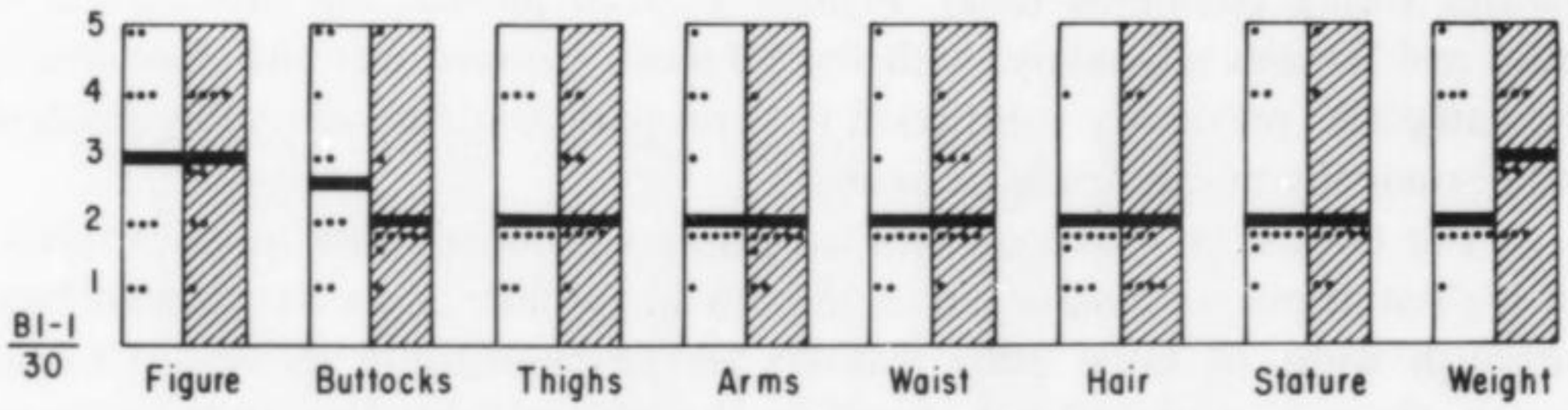


Fig. 8. Secondary genderal characteristics of female transsexuals (N = 10, 9).

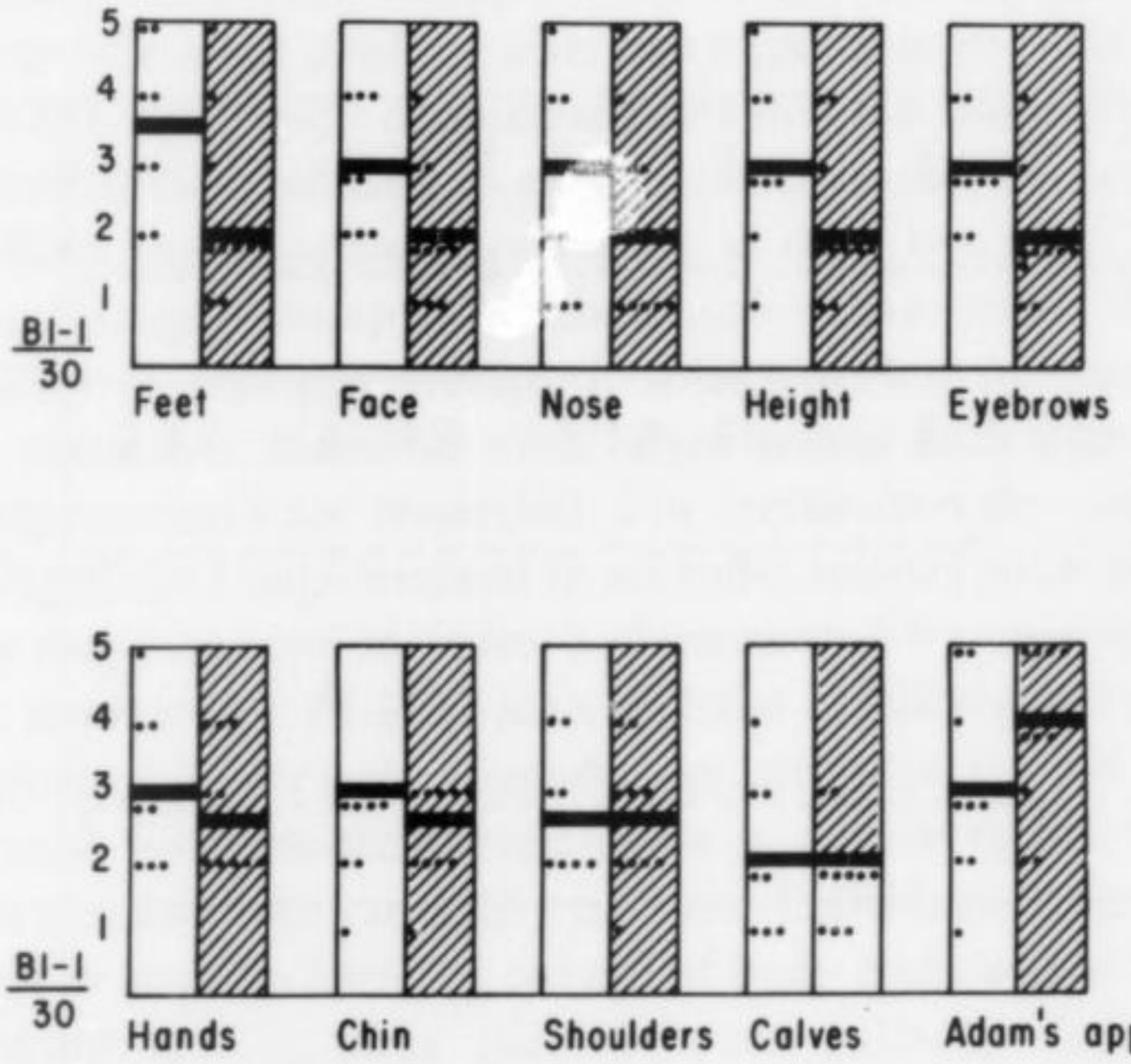
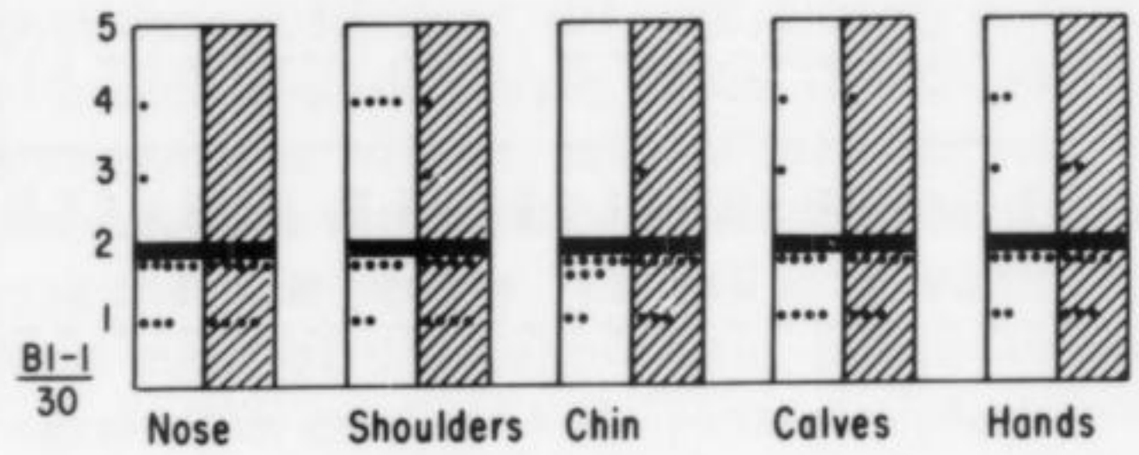


Fig. 9. Hormonally unresponsive characteristics of male transsexuals (N = 8, 10).



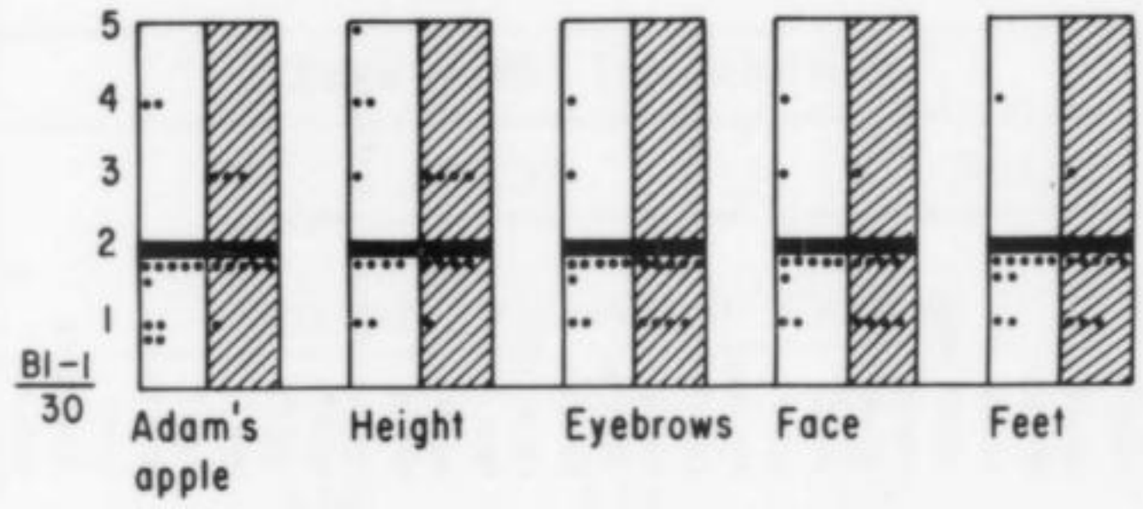


Fig. 10. Hormonally unresponsive characteristics of female transsexuals (N = 10, 9).

		Case 20 response	change	Case 21 response	change	Case 4 response	change	Case 19 response	change	Case 33 response	change	Case 28 Before Treatment response	change	Case 28 After Treatment response	change
nose		2		4	yes	4	yes	1		2		1		1	
shoulders		2		4	yes	3		2		2		4	yes	1	
hips		2		5	yes	4	yes	1		2		2		1	
chin		2		2		3		1		2		2		1	
calves		2		4	yes	3		1		2		1		1	
breasts		5	yes	5	yes	--		5	yes	5	yes	5	yes	5	yes
hands		2		4	yes	3		1		2		2		1	
adam's apple		2		2		3		1		2		2		1	
vagina	(scrotum)	5	yes	5	yes	4	yes	3		2		5	yes	5	yes
height		2		4	yes	3		1		2		2		1	
thighs		2		4	yes	3		1		2		2		1	
arms		2		5	yes	4	yes	4	yes	2		2		1	
eyebrows		2		4	yes	3		1		2		2		1	
clitoris	(penis)	5	yes	4	yes	3		3		2		5	yes	5	yes
waist		2		5	yes	4	yes	1		2		2		1	
muscles		3	yes	5	yes	3		4	yes	3	yes	5	yes	1	
buttocks		2		5	yes	3		1		2		3		1	
facial hair		3	yes	5	yes	--		5	yes	2		5	yes	4	yes
face		2		4	yes	3		1		2		2		1	
weight		2		4	yes	4	yes	2		2		2		4	yes
biceps		3	yes	5	yes	3		3		2		4	yes	1	
ovaries-uterus	(testicles)	5	no	5	yes	--		2		4	yes	5	yes	5	yes
hair		2		2		1		1		2		2		1	
voice		2		5	yes	4	yes	4		4	yes	5	yes	1	
feet		2		4	no	3		1		2		2		1	
figure		2		5	yes	4	yes	1		2		2		1	
body hair		3	yes	5	yes	--		3		2		4	yes	4	yes
chest		4	yes	5	yes	4	yes	5		2		5	yes	5	yes
appearance		3	yes	4	yes	--		3		3	yes	5	yes	1	
stature		2		4	yes	--		2		2		2		1	
BI-1/30	Median Score	2.25		4.21		3.29		1.50		2.10		2.37		1.18	
BI-1/10	Median Score	2.00		3.67		3.05		1.05		2.00		1.93		1.00	

Fig. 11. BI-1 scale of selected cases.

There will never be any level of acceptance of these parts, which he feels are a mistake or are inconsistent with his body image. These high scores before and after hormone treatment confirm what one expects from clinical experience and simply underline the already appreciated fact that the transsexual is not satisfied with endocrinological treatment alone. Male transsexuals become less dissatisfied with their breasts and body hair (see Fig. 5), as these two body features are quite responsive to estrogen therapy. For some male transsexuals, the breast enlargement secondary to estrogen therapy is sufficient, but for most male-to-female transsexuals there is a desire for even larger breasts such that breast augmentation surgical procedures are requested. For female-to-male transsexuals, there is statistically significant improvement in attitudes toward voice and facial hair (see Fig. 6). This improvement in voice is documented by separate analyses of the independent data on the BI-1/30 scale and the combined data for the BI-2 test.

As hormonal treatment proceeds, the attitudes toward many of the secondary genderal body characteristics move in a more satisfied direction. However, there is considerable variability between individuals. This variability is due to differences in expectations for change of body parts and to the differences in attitudes toward specific body parts between patients. Scores for the males showed significant increases in satisfaction (i.e., lowered scores) for hips, figure, and waist (see Fig. 7) with the combined data. The independent data substantiated the statistically significant improvements for hips and figure. It may also be stated that the correlated data gathered to date ($N = 4$ for females and $N = 3$ for males) support these conclusions, although certainly statistical significance is not possible with such a small sample (Table III). In addition to the above significant improvements in attitude, most of the other body parts in this secondary group are perceived with greater satisfaction after contrary sex hormone treatment by male-to-female (see Fig. 7) as well as by female-to-male (see Fig. 8) transsexuals. While some of this improvement can be accounted for by the direct, physiological effect on those body parts, we speculate that some of the increased satisfaction is due to the generally improved mood of the transsexuals, who are very happy to be started on the treatment program. This latter specula-

Table IV. BI-1 Test Reliability

	BI-1/30		BI-1/10	
Patient No.	First test	Second test	First test	Second test
8	2.44	2.44	2.21	2.13
7	2.38	2.29	2.33	2.21
13	4.04	4.14	3.90	4.17
18	2.25	2.29	2.00	2.13
19	1.50	1.33	1.05	1.13
21	4.21	4.42	3.67	3.88

tion is substantiated by the generally lower score in the hormonally unresponsive characteristics (see Figs. 9 and 10), as well as by the lower BI-1/10 scores (see Tables I, II, and III). All of the patients, except the one previously mentioned exception (No. 29), and one whose score stayed constant (No. 31), showed a lowering of their BI-1/10 scores. This suggests that hormone treatment has an overall beneficial effect on the transsexual's body attitude which is not directly attributable to a change in those particular body parts which are responsive to hormone treatment. However, these changes do not reach statistical significance for this small sample. We need to gather more data on this point with a larger sample of transsexuals.

This pilot study provides little information on the effects of surgery on the body attitudes, because only two of the 32 transsexual patients had undergone sex-reassignment surgery. Their most recent BI-1/30 scores are 1.94 for the male patient and 1.10 for the female. This latter score is the second lowest recorded in this sample of 32 patients, and the 1.94 is also a very low score. One other female transsexual was tested first after being on testosterone for 3 years and then retested after undergoing mastectomy, total hysterectomy, and vaginectomy. The BI-1/30 scores for this individual were 2.07 initially and 1.39 after surgery. The data which are available suggest that significant improvement in body acceptance does occur with surgical treatment and that this instrument is adequately sensitive to quantify and document this improvement, a phenomenon which is readily apparent clinically.

Male-Female Differences

It was anticipated that the BI-1 scores might reflect a sex difference. We expected that the female transsexuals might have a greater degree of initial body satisfaction than the males. This expectation is partially borne out (see Fig. 2). The only hard evidence for this is a lower median BI-1/10 score (significant at $\alpha = 0.05$) for the pretreatment females as compared to the pretreatment males (independent samples). The median BI-1/30 scores for the combined data approach significance ($\alpha = 0.1$). A larger N may clarify this question.

Other Correlates

The BI-1/30 and BI-1/10 scores were examined for correlations with age, marital status, extent of endocrinological treatment, and number of years having passed. In no instance was a statistically significant correlation found for any single variable. However, for any given transsexual, these factors may contribute to a change in body attitude. The instrument was subjected to reliability tests, and the results proved the reproducibility of the scores (Table IV). Finally, the responses of selected cases are summarized in Fig. 11.

CONCLUSION

These body image scales are intended for use as an additional tool in the evaluation of the transsexual's request for sex reassignment. Not all patients who have undergone sex-reassignment procedures have been pleased at the outcome. Some have regretted it altogether, while others have become insistent on further cosmetic procedures (Pauly, 1968, 1969a,b; Money and Wolff, 1973). By establishing the range and variation of a large population of transsexuals for these tests, it will be possible to identify and interpret the scores of individuals who deviate from the norm. The nontranssexual, the patient with excessive polysurgical desires, and the patient who has unreasonable expectations of surgery may all be better identified. Moreover, these instruments are useful in following true transsexual patients as they progress through the evaluation procedures and endocrinological treatment prior to surgery, as well as for evaluating the response to sex-reassignment surgery. Our data have shown that the scores vary greatly not only between individuals but also between the stages of treatment for the same person.

It should be emphasized that the data presented here are drawn from a group of 32 male and female transsexuals, one small sample. As new patients are evaluated and tested, and current ones are followed and retested, the *N* will become larger and more definitive results will be forthcoming. At this time, we have attempted to define the body image scale and to present the characteristic responses of this one sample. It is our hope that this instrument may prove useful to evaluators from other gender identity centers. The results from different samples of transsexuals can be compared to see if these initial impressions are confirmed by other investigators. In so doing, we will be able to better define transsexualism, in more specific, concrete, and quantifiable terms related to the acceptance or rejection of body form.

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